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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

PRECISION AUTOMATION, INC., a
Washington Corporation, and TIGERSTOP,
LLC, an Oregon Corporation,

CV. 07-707-AC

Plaintiffs,

FINDINGS AND
RECOMMENDATION

v.

TECHNICAL SERVICES, INC., an Iowa
Corporation, and DAVID KREVANKO, an
individual,

Defendants.

ACOSTA, Magistrate Judge:

Findings and Recommendation

Presently before the court is the issue of claim construction of the language of United States Patent Nos. 7,031,789 (“the ‘789 patent”) and 7,171,738 (“the ‘738 patent”). The patents disclose methods for automated material processing.

The court conducted a *Markman* hearing on the issue of claim construction on October 10, 2008. After consideration of the filings and materials, the court construes the terms as set forth below.

Background

Plaintiffs Precision Automation, Inc. and TigerStop LLC (collectively, “Precision”) allege that defendant Technical Services, Inc. (“TSI”) is infringing the ‘789 patent and the ‘738 patent. Claims by both parties surrounding United States Patent No. 6,631,006 (“the ‘006 patent”) were previously alleged in this case, but were dismissed with prejudice on August 15, 2008. Although the claims of the ‘006 patents are no longer being asserted, the ‘006 patent remains relevant because it is incorporated by reference in both the ‘789 patent and the ‘738 patent. The patents at issue relate to aspects of automated material processing, such as preparing components from stock material for assembly into manufactured goods. For example, the patented methods can be used in conjunction with a system that accepts stock lumber and processes the lumber to create a list of components, while avoiding defects and optimizing use of the lumber.

Specifically, Precision asserts claims 1-4 and 6-9 of the ‘789 patent and claims 1-8 of the ‘738 patent. Within these claims, the parties disagree on the construction of six terms.¹ In the ‘789 patent, the parties disagree as to the construction of “field” and “spreadsheet,” while in the ‘738 patent they disagree as to “drill list data,” “optical measuring device,” “virtually,” and “workpiece.” The parties filed a joint claim construction statement (“Joint Statement”), which lays out their respective proposed definitions for the disputed terms. The court held a *Markman* hearing on

¹The parties previously sought construction of additional terms, but agreed prior to the *Markman* hearing that the terms should be given their plain and ordinary meaning.

October 10, 2008. At the *Markman* hearing, TSI requested that instead of construing only “drill list data,” the court construe the entire phrase in which “drill list data” appears in the claims, which is “drill list data corresponding to positions on workpieces where holes should be drilled.” The parties submitted supplemental briefs on this issue after the *Markman* hearing (“Pl. Supp. Brief” and “Def. Supp. Brief,” respectively).

Legal Standard

It is a “bedrock principle of patent law that the claims of a patent define the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). The analysis for an action of patent infringement involves two steps: (1) the proper construction of the asserted claim; and (2) a determination of whether the accused method or product infringes the claims as properly construed. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff’d* 517 U.S. 370 (1996). The proper construction of the asserted claims is a matter of law determined by the court. *Id.* at 979 (“Construction of a patent, including the terms of art within its claims, is exclusively within the province of the court.”). Once the claims are properly construed, whether the claims infringe a product or process is generally a question of fact for the jury. *Id.* at 390.

In construing claim language, the words of a claim “are generally given their ordinary and customary meaning.” *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application. *Phillips*, 415 F.3d at 1313. “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the

widely accepted meaning of commonly understood words.” *Id.* at 1314. However, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313.

Thus, in interpreting a claim term, the court first looks at the intrinsic evidence of the patent itself, including the claims, the specification and, if in evidence, the prosecution history. *Vitronics*, 90 F.3d at 1582. The court looks at the words of the claims themselves, both asserted and unasserted. *Id.* “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Phillips*, 415 F.3d at 1314. For example, the Federal Circuit has consistently held that interpreting a claim term in a manner that renders subsequent claim language superfluous is improper. *See, e.g. Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007) (holding that a definition that renders claim language superfluous is “a methodology of claim construction that this court has denounced”); *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”). Similarly, the doctrine of claim differentiation recites the principle that the limitations in each claim are presumed to be distinct from one another. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (holding that the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim).

However, the claims “do not stand alone,” *Phillips*, 415 F.3d at 1315, and “must be read in view of the specification, of which they are a part.” *Markman*, 52 F.3d at 978. Accordingly, the specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive;

it is the single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at 1582. The specification is especially important because “a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.” *Id.* As such, “it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Id.*

However, limitations found only in the specification are not to be read into the claims if the claim language is broader than the specification. *Electro Medical Sys., S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1054 (Fed. Cir. 1994) (“although the specifications may well indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than such embodiments”); *Teleflex, Inc. v. Ficosa N.A. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002) (refusing to import a limitation found in the specification even when the specification disclosed only one embodiment). Rather, the specification will restrict the meaning of a claim term if it “characteriz[ed] the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Teleflex*, 299 F.3d at 1327.

In addition to the specification, the court should consult the prosecution history of the patent, if in evidence. *Phillips*, 415 F.3d at 1317. Although typically less helpful than the specification, the prosecution history may demonstrate how the inventor understood the invention and whether the inventor limited the scope of the invention during prosecution to avoid reading on prior art. *Id.* “Under the doctrine of prosecution disclaimer, a patentee may limit the meaning of a claim term by

making a clear and unmistakable disavowal of claim scope during prosecution.” *Purdue Pharma L.P. v. Endo Pharmaceuticals Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006). “A patentee could do so, for example, by clearly characterizing the invention in a way to try to overcome rejections based on prior art.” *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008). However, “[p]rosecution disclaimer does not apply to an ambiguous disavowal.” *Id.* at 1375.

Finally, if the ordinary and customary meaning of a claim term is not apparent from the intrinsic evidence, courts are authorized to consult extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* (quoting *Markman*, 52 F.3d at 980). The Federal Circuit has noted that dictionaries and treatises can be particularly useful in claim construction. *Phillips*, 415 F.3d at 1318.

I. The ‘789 Patent

A. “Field”

The term “field” appears in many of the claims of the ‘789 patent, including each independent claim one, seven, and eight. ‘789 Patent, col.2 ll.53-54, 60, 63; col.3 ll.4, 14; col.4 ll.7-10, 18. Precision proposes that the term “field” should be construed as “an element of data.” (Joint Statement 7). Conversely, TSI proposes that “field” be defined as “a single row or column of a spreadsheet.” *Id.* Both parties support their definitions by referring to the same portion of the specification, which states “[s]preadsheet 18 is organized in multiple fields. Fields may be arranged by column, row or any other systematic arrangement. The user may then sort 26 data in the spreadsheet, for example, by field.” ‘789 patent, col.2 ll.4-7. Precision also points to the appendix which was included with the patent application and therefore part of the intrinsic record. The appendix provides an example of a preferred embodiment of the invention, which includes a glossary

with the following definition: “Field - Fields contain a specific type of value in files. Dimension is an example of a field name. Fields are enclosed in double quotation marks (“”) and separated from each other by commas.” ‘789 patent, App. 53.

In light of the specification, which states that “fields may be arranged by column, row, or any other systematic arrangement,” TSI’s proposed definition of field as a “single row or column of a spreadsheet” would be improper. A single column or row is already arranged by column or row, and it does not allow for other systematic arrangements, as dictated in the specification. However, if field is defined as an element of data, then it follows logically that the elements of data can be arranged by column, row, or any other systematic arrangement.

Conversely, TSI argues that defining field as an element of data is improper, because the specification states that “the user may then sort 26 data in the spreadsheet, for example, by field.” TSI claims that “the specification would then describe sorting data in the spreadsheet by a single element of data, an action which is impossible to perform.” While TSI is correct that it is impossible to sort a single element of data, sorting data by field implies that the user is sorting multiple elements of data.

As evidenced by the definition of field in the appendix, the term “field” as used in the context of the patent refers to the element of a data set that stores a specific type of data. Field incorporates not only the value of the data element, but also an associated category of what is being measured and an associated item on which it is being measured. For example, a data set such as the one at issue here may have one field which tells the user that part number 1234 has a value for length of 24 inches. In the context of a spreadsheet arranged by rows and columns, a field represents all the information in one cell of the spreadsheet. The row may correspond to the part number, the column

to the category, and the contents of the cell to the value of the field.

If the spreadsheet contains many fields with data for different part numbers and measurement categories, the user can sort that data in many different ways. For example, the values of length for multiple part numbers can be sorted from largest to smallest. Or the values of multiple categories can be sorted for one part number. Thus, to sort by field, the user is sorting by individual elements of data. Although the user may sort *within* a single row or column of a spreadsheet, he or she is not sorting *by* a row or column of a spreadsheet. Therefore, in the context used in the specification, a “field” is properly construed as “an element of data.” Accordingly, the court should adopt Precision’s proposed definition for “field.”

B. “Spreadsheet”

The term “spreadsheet” appears throughout the claims of the ‘789 patent. Precision’s proposed definition of a spreadsheet is “an editable database capable of storing multiple fields of data.” (Joint Statement 7). On the other hand, TSI proposes that a spreadsheet be defined as “a table storing data arranged in rows and columns, where each datum can have a predefined formulaic relationship to other data in the table.” *Id.*

In support of its proposed definition, Precision cites Section 4.3.1 of the appendix to the ‘789 patent, which states:

- 4.3.1 The Product Manager main user interface will emulate a spreadsheet.
- 4.3.1.1 Each column will be able to be resized.
- 4.3.1.2 Users will have the ability to sort on any column.
- 4.3.1.3 Users will be able to hide any column.
- 4.3.1.4 Users will be able to show hidden columns.
- 4.3.1.5 Each field on the spreadsheet will be editable by the user.
- 4.3.1.6 Users will be able to change the order of columns.

‘789 Patent, App. 8. Precision argues that the phrase “[e]ach field on the spreadsheet” implies that

the spreadsheet can store multiple fields of data. Precision further states that the language that each field “will be editable” clearly defines an editable database. At oral argument, Precision accepted TSI’s characterization of a spreadsheet as a “table storing data,” but recommended that “arranged in rows and columns” be changed to “arranged in rows and/or columns” to account for the situation where the spreadsheet contains only a single row or column. Rather, Precision’s point of contention is that TSI’s inclusion of the limitation that “each datum can have a predefined formulaic relationship to other data in the table” is improper.

For its part, TSI cites the claims to support its assertion that “each datum can have a predefined formulaic relationship to other data in the table.” Specifically, claim six describes an embodiment of the invention “comprising performing a mathematical function on selected data in the spreadsheet,” and claim eight speaks of an embodiment which includes “selecting a field in the spreadsheet [and] multiplying data in the field by a factor.” ‘789 Patent, col.3 ll.6-7; col.4 ll.7-8.

Additionally, TSI argues that the limitation that “each datum can have a predefined formulaic relationship to other data in the table” is supported by the appendix to the ‘789 patent. The glossary of the appendix contains the following definition: “Excel - A spreadsheet program developed by Microsoft Corp.” ‘789 Patent, App. 54. TSI contends that this shows the inventors equate a spreadsheet with Microsoft Excel™, and in Excel™ the contents of each cell can have a predefined formulaic relationship with other cells.

Here, the court agrees with the compromise definition proposed by Precision at oral argument that a spreadsheet is “an editable table storing data arranged in rows and/or columns.” This follows the generally accepted definition of a spreadsheet, and the court finds no support in the intrinsic evidence to give spreadsheet an alternative meaning. The specification clearly states that the

spreadsheet is editable. Furthermore, the specification speaks only of a spreadsheet with fields arranged in rows and columns, and does not suggest that there are alternative arrangements. As Precision suggested, the language “and/or” should be included to account for the situation where the spreadsheet contains only a single row or column.

However, the limitation that “each datum can have a predefined formulaic relationship to other data in the table” is not supported by the intrinsic evidence and is therefore improper. The court is cautioned against incorporating a limitation found in the specification into the claims when the claim language is broader. Here, independent claim one describes an embodiment of the invention which includes “moving the material list into a spreadsheet [and] selecting a field in the spreadsheet.” ‘789 Patent, col.2 ll.52-53. It says nothing of any formulaic relationship between fields in the spreadsheet.

Moreover, there is no mention in the specification that the cells in any embodiment of the invention have a predefined formulaic relationship. Performing a mathematical function on selected data does not imply that the mathematical function is predefined or references the contents of another cell. Rather, the specification states “if *the operator* wants to cut frame parts for multiple modules, *he* can multiply, or otherwise edit, the part numbers in a given field prior to downloading the data to the optimizer.” ‘789 Patent, col.2 ll.25-29 (emphasis added). Clearly, the mathematical function is initiated by the user and is not a predefined formulaic relationship with other cells.

Although TSI argues that the inventors reference to Excel™ in the appendix shows the inventors intended a spreadsheet to have the characteristics of a spreadsheet in Excel™, this argument improperly imports a limitation into the claims that is found only in the specification. Besides the glossary, the court finds only one other reference to Excel™ in the intrinsic record. After

a list of other possible formats for the cutlist file, section 4.3.7.5 of the appendix provides that “[t]he cutlist file may be an Excel™ spreadsheet.” ‘789 Patent, App. 9. This is not limiting language and is only one of several given examples for the cutlist file format. The specification makes no reference to the ability in Excel™ to have a predefined formulaic relationship between cells. Furthermore, the fact that the inventors recognized that Excel™ is a type of spreadsheet program does not mean that all spreadsheets have all the features of the Excel™ program. Therefore, the limitation that “each datum can have a predefined formulaic relationship to other data in the table” should not be read into the definition of spreadsheet.

In light of the above discussion, the court should construe a spreadsheet as “an editable table storing data arranged in rows and/or columns.”

II. The ‘738 Patent

A. “Drill List Data”

The term “drill list data” appears in each of the independent claims of the ‘738 patent. ‘738 Patent, at col.21 l.29; col.22 ll.7, 48; col.24 l.4. Precision proposes that “drill list data” should be defined as “data corresponding to the formation of holes in a workpiece.” (Joint Statement 9). Conversely, TSI requests that the court construe the entire phrase in which “drill list data” appears in the claims, which is “drill list data corresponding to positions on workpieces where holes should be drilled.” (Def. Supp. Brief 1). TSI’s proposed definition for the entire phrase is “data identifying the specific location where a hole should be drilled on a workpiece.” *Id.* In the event the court decides to construe the entire phrase, Precision proposes the definition “data relating to the formation of holes in desired positions on a workpiece.” (Pl. Supp. Brief 9). Here, the court is inclined to construe the entire phrase, because the term “drill list data” always appears with the subsequent

language in the claims and the parties have had the opportunity to submit supplemental briefs on the construction of the entire phrase.

Looking first at the specification, the patentees may restrict the meaning of a term by “characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Teleflex*, 299 F.3d at 1327. In the ‘738 patent, the relevant part of the specification is as follows:

Information about desired products also or alternatively may include data corresponding to a list of other processing operations, shown at 74, to be performed on workpieces. For example, the list of other processing operations may include a drill list with data corresponding to positions on desired products at which holes should be formed (and/or the depth/angle of each hole), a joinery list with data corresponding to joinery structures . . . , etc. . . . In some examples, other processing operations may be specified by processing rules that allow processing positions to be calculated for each desired product based, for example, on the length of the desired product. Exemplary processing rules may include processing at the longitudinal midpoint of a desired product, processing at a constant spacing from the opposing ends of a desired product, etc.

‘738 Patent, col.4 ll.36-43, 46, 52-59. TSI contends that drill list data corresponding to positions on workpieces where holes should be drilled is distinct from a processing rule, because they are dealt with separately in the specification. Therefore, drill list data corresponding to positions on workpieces where holes should be drilled cannot include the less specific data of processing rules.

However, the two terms are not clearly separated by the patentees in the specification. Rather, both are subsets of how “other processing operations” are carried out, but are not clearly delineated from one another. The specification gives examples of “other processing operations,” including “drill list data with data corresponding to positions on workpieces where holes should be formed,” then goes on to say “[i]n some examples, other processing operations may be specified by processing rules.” *Id.* at col.4 ll.39-42, 52-54. A logical reading of these two statements implies that

processing rules can be used to specify a subsection of the group “other processing operations,” which in turn may encompass a portion of the subsection “drill list data with data corresponding to positions.” That is to say, the term “drill list data with data corresponding to positions” as used in the specification may encompass processing rules. This is not the “clear disavowal of claim scope” necessary to restrict the meaning of the term.

Furthermore, it is logical that a processing rule such as “processing at the longitudinal midpoint of a desired product” can be “corresponding to positions on workpieces where holes should be drilled” as recited in the claims. If the drill list data included the information that the workpiece should be drilled at the longitudinal midpoint, that would correspond to a position on the workpiece, namely the longitudinal midpoint. The data by itself would not identify the specific position where a hole should be drilled, but when read in conjunction with the other data, such as the length of the workpiece, the system would be able to calculate the specific position where a hole should be drilled. Therefore, the specification supports the broader interpretation of “drill list data corresponding to positions on workpieces where holes should be drilled” that does not require the data to identify specific positions.

Similarly, the prosecution history does not narrow the scope of “drill list data corresponding to positions on workpieces where holes should be drilled.” “Under the doctrine of prosecution disclaimer, a patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of claim scope during prosecution.” *Purdue*, 438 F.3d at 1136. “A patentee could do so, for example, by clearly characterizing the invention in a way to try to overcome rejections based on prior art.” *Computer Docking*, 519 F.3d at 1374. However, “[p]rosecution disclaimer does not apply to an ambiguous disavowal.” *Id.* at 1375.

Here, the patentees did not narrow the meaning of the term during prosecution by a “clear and unmistakable disavowal of scope.” Both parties’ arguments center around the claim amendments and inventor remarks that led to allowance of the claims. These amendments and remarks were filed with the United States Patent and Trademark Office (“PTO”) on March 14, 2006, in response to an office action which rejected all the pending claims. Claim twenty-six of the ‘738 patent application, the first independent claim still pending in the ‘738 patent application, read as follows prior to the amendment:

A method of processing a workpiece, comprising:
 receiving data corresponding to a cut list, a characteristic dimension of a workpiece, and a position of one or more defects, if any, within the workpiece;
 pushing a workpiece automatically along a linear path to a plurality of positions disposed substantially along the linear path;
 cutting the workpiece at one or more of the plurality of positions; and
 drilling the workpiece at one or more of the plurality of positions,
 wherein pushing, cutting, and drilling are performed automatically according to the data so that utilization of the workpiece is optimized to satisfy the cut list and the one or more defects are removed.

(Decl. of Scott Johnson, Exhibit U 2). Claim thirty-five added the limitation: “[t]he method of claim 26, further comprising receiving a drill list defining locations of holes within workpiece products, wherein drilling is performed automatically based on the drill list.” *Id.* at 3. Claim thirty-five was the only claim which recited a drill list. In an office action, the patent examiner rejected all the pending claims, including claims twenty-six and thirty-five, which were rejected under 35 U.S.C. § 102(a) as being anticipated by United States Patent Publication 2003/0041919 to Giles (“Giles”). (Decl. of Scott Johnson, Ex. V 4). Claim twenty-six was also rejected under § 102(a) as being anticipated by United States Patent number 4,736,511 to Jenkner (“Jenkner”). *Id.* at 3.

In response to the office action, Precision cancelled all the pending claims and submitted new

claims 42-56 on March 14, 2006. (Decl. of Scott Johnson, Ex. X). The first independent claim of the new claim set read:

A method of processing a workpiece, comprising:
 providing a supply of workpieces for processing into suitable dimensions specified in a cut list for carrying out one or more construction projects, an apparatus configured to cut and drill workpieces from the supply, and a computer connected to the apparatus, the apparatus having a pusher for engaging a trailing end of a workpiece and driving the workpiece down a linear processing path, and a plurality of processing stations arranged along the processing path, at least one of the stations including a saw for cutting, and at least one of the stations including a drill for boring,
 programming the computer with an optimization program configured to calculate an optimum processing plan for a workpiece based on a starting length of the workpiece, location of one or more defects in the workpiece, and current requirements specified in a cut list stored in the computer,
 entering a cut list into the computer, the cut list specifying length dimensions of pieces required for one or more construction projects, the number of each length dimension required, and drill list data corresponding to positions on work pieces where holes should be drilled,
 selecting a work piece from the supply,
 inputting data into the computer including the length of the work piece, and the location of one or more defects, within the workpiece;
 automatically calculating an optimum plan for processing the work piece to satisfy current cut list requirements, and removing the one or more defects,
 automatically driving the pusher to push the trailing end of the work piece down the processing path toward the processing stations, and
 automatically cutting and drilling the workpiece at the processing stations according to the optimum plan determined in the calculating step.

Id. at 2-3. In conjunction with the new claims, Precision included inventor remarks which explained in their view why the claims were patentable over the prior art. The inventors stated:

Neither Jenkner, Giles, or any of the other art of record, individually or in any combination, teaches or suggests (a) a method employing an apparatus configured to cut and drill wood pieces under control of a computer programmed to calculate an optimum processing plan for a workpiece based on a starting length of the workpiece, location of one or more defects in the workpiece, and current cut list requirements stored in the computer; (b) an apparatus or method involving entering a cut list into a computer in which the cut list includes drill list data corresponding to positions on workpieces where holes should be drilled; and (c) an apparatus or method which

automatically drives a pusher to push the trailing end of a workpiece down a processing path toward processing stations where cutting and drilling are automatically carried out according to the optimum plan determined in the calculating step.

Id. at 7-8. After considering the new claims and the accompanying remarks, the patent examiner sent a notice of allowable subject matter.² Along with the notice of allowable subject matter, the examiner included a statement of reasons for allowance. The examiner noted:

Regarding claim 45, the prior art does not disclose the combination of limitations, specifically wherein limitations includes inputting data into the computer including the length of the workpiece and the location of one or more defects including knots, cracks or discoloration within the workpiece.

Regarding claim 49, the prior art does not disclose the combination of limitations, specifically wherein limitations include automatically executing a remainder management program to determine how to use or further process material excluded from the workpiece according to the optimum plan.

Regarding claim 50, the prior art does not disclose the combination of limitations, specifically wherein the limitations include inputting data into the computer including the length of the workpiece, and marking the location of one or more defects within the workpiece.

Regarding claim 56, the prior art does not disclose the combination of limitations, specifically wherein the limitations include automatically placing a spacer element into a cavity at a processing station according to the optimum plan.

(Decl. of Shawn Kolitch in support of Pl. Supp. Brief, Ex. C 2).

Looking at the sequence of communications between Precision and the PTO during prosecution of the '738 patent, Precision did not make any "clear and unmistakable disavowal of scope" with respect to the term "drill list data corresponding to positions on workpieces where holes should be drilled." The term "drill list data" and the subsequent limitation "corresponding to positions on workpieces where holes should be drilled" were added at the same time. The examiner did not assert the scope of the term "drill list data corresponding to positions on workpieces where

²The claims were amended once more prior to allowance, however the "drill list data" language was not changed. *See* Decl. of Scott Johnson, Ex. Y, Z.

holes should be drilled” as a basis of rejection, and thus the inventors were not forced to limit the scope of the term to overcome the prior art. While the inventors stated that the inclusion of “drill list data corresponding to positions on workpieces where holes should be drilled” was not taught by the prior art, they did not attach any specific meaning to the term, much less imply that the term made the invention unique because their drill list data included specific positions. Furthermore, the examiner did not cite the inclusion of drill list data corresponding to positions on workpieces where holes should be drilled as a reason for allowance of the claims, but instead relied on other grounds. Thus, the scope of the term “drill list data corresponding to positions on workpieces where holes should be drilled” was not an explicit part of the negotiations between Precision and the PTO. Therefore, the prosecution history should not restrict the scope of the term “drill list data corresponding to positions on workpieces where holes should be drilled.”

Thus, the term “drill list data corresponding to positions on workpieces where holes should be drilled” should be given its plain and ordinary meaning as supported by the specification. The specification supports a broader interpretation of the term that does not limit it to identifying specific positions. However, the data still must “correspond to positions,” so it cannot merely be “data corresponding to the formation of a hole,” which conceivably could include no positional data whatsoever. While the specification clearly states that “drill list data” alone can include data other than positions, such as the depth or angle of the hole, the claims only recite “drill list data corresponding to locations on workpieces where holes should be drilled.” Thus, the data must contain some information with which the system can ascertain the location where the hole(s) should be drilled.

The definition that Precision proposes in its supplemental brief, that “drill list data

corresponding to positions on workpieces where holes should be drilled” should be construed as “data relating to the formation of holes in desired positions on a workpiece,” captures the idea that the data must relate in some fashion to a position on the workpiece.

In conclusion, Precision’s definition of “drill list data corresponding to positions on workpieces where holes should be drilled” is supported by the specification. The patentees did not restrict the meaning of the term by a clear disavowal of scope in either the specification or the prosecution history of the ‘738 patent. Accordingly, the court should construe “drill list data corresponding to positions on workpieces where holes should be drilled” as “data relating to the formation of holes in desired positions on a workpiece.”

B. “Optical Measuring Device”

The term “optical measuring device” appears only in dependant claim eight of the ‘738 patent. ‘738 Patent, col.22 l.66. Precision’s proposed definition of “optical measuring device” is “a device that can measure at least one property of electromagnetic radiation.” (Pl. Rebuttal 20). TSI’s proposed definition is “a device that inputs data regarding the location of defects in a workpiece into a local controller based on measurement of a length of an optical path.” (Joint Statement 10). For the reasons stated below, the court should construe “optical measuring device” as “a device that can measure at least one property of electromagnetic radiation in the wavelength range including only infrared, visible, ultraviolet, and X rays.”

Here, TSI’s proposed definition improperly renders subsequent claim language superfluous. Claim eight of the ‘738 patent states, in its entirety: “The method of claim 6 further comprising operating an optical measuring device to input location of a defect.” ‘738 Patent, col.22, ll.65-67. The first portion of TSI’s proposed definition, which states that an optical measuring device is “a

device that inputs data regarding the location of defects in a workpiece,” would render the claim language “to input location of a defect” superfluous. Therefore, in order to give meaning to all words of the claim, the definition of optical measuring device should not be restricted to a device that inputs data regarding the location of defects. However, the court notes that the term “optical measuring device” appears only in claim eight, and the subsequent language of claim eight effectively makes the same restriction for purposes of that claim.

Additionally, the portion of TSI’s proposed definition that requires an optical measuring device to input data “into a local controller” and restricts the device to measurement of a length of an optical path improperly reads limitations found in the specification into the claims. Example one of the specification states, in relevant part:

Alternatively, or in addition, system 130 may include an optical measuring device 156 that inputs data to the local controller based on a path followed by light 158. For example, interruption of the light path by an end of a future workpiece 160 to be processed after current workpiece 134, and/or by an object placed manually (using human energy) in the light path, may be used to input the length of the future workpiece and/or a position(s) of a defect along the length of the future workpiece, among others.

‘738 Patent, c.13 ll.43-52. However, “particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments.” *Electro*, 34 F.3d at 1054. *See also Teleflex*, 299 F.3d at 1327 (refusing to import a limitation found in the specification even when the specification disclosed only one embodiment). The discussion of an optical measurement device in the specification contains no “expressions of manifest exclusion or restriction” that represent “a clear disavowal of claim scope.” *See Teleflex*, 299 F.3d at 1327. Rather, the terms “may,” “for example,” and “among others” show that the inventor intended this to be merely one embodiment of the claimed invention. Therefore, the limitations that the optical

measuring device input data “into a local controller” and be restricted to only measuring the length of an optical path should not be included in the definition of “optical measuring device.” Instead, Precision’s proposed characterization that the device can “measure at least one property” of the optical signal should be adopted.

Lastly, the parties disagree over the scope of what types of signals are measured by the optical measuring device. Both parties agree that the optical measuring device measures “light,” but disagree as to what light encompasses. Precision contends that light encompasses more than the visible spectrum, while TSI argues that light does not cover the entire spectrum of electromagnetic radiation. As an example, TSI argues that a radio signal is not light, even to a person of ordinary skill in the art. Because the intrinsic record is silent as to the meaning of “light” in the context of the patent, the court will turn to the dictionary definition. Both parties cite the same dictionary definition, which defines light as “electromagnetic radiation in the wavelength range including infrared, visible, ultraviolet, and X rays.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 1308 (1993). This definition fits with Precision’s contention that a person skilled in the art understands light to include more than just visible light, as well as with TSI’s contention that light does not include all forms of electromagnetic radiation, such as radio signals.

For the reasons stated above, the court should construe “optical measuring device” as “a device that can measure at least one property of electromagnetic radiation in the wavelength range including only infrared, visible, ultraviolet, and X rays.”

C. “Virtually”

The term “virtually” appears in claim seven of the ‘738 patent. Claim seven states, in its entirety: “The method of claim 6, wherein the marking step is performed virtually.” ‘738 Patent,

col.22 ll.63-64. The marking step described in claim six comprises “marking the location of one or more defects within the workpiece.” *Id.* at col.22 ll.52-53. Precision contends that, in the context of the patent, “virtually” means “without requiring an actual physical mark.” (Joint Statement 11). TSI proposes that virtually means “wherein the marking is done by use of an optical measuring device which measures the length of an optical path.” *Id.*

However, TSI’s proposed definition is improper because it renders claim eight superfluous and violates the doctrine of claim differentiation. If TSI’s definition were adopted, the limitation recited in claim seven would comprise the method of claim 6 wherein the marking is done by use of an optical measuring device which measures the length of an optical path. However, the use of an optical measuring device in this way is included in claim eight, which recites “[t]he method of claim 6 further comprising operating an optical measuring device to input location of a defect.” ‘738 Patent, col.22 ll.65-67. If TSI’s proposed definition of “virtually” were adopted, the embodiment recited by claim eight would be encompassed by claim seven. This would improperly render subsequent claim language superfluous and violate the doctrine of claim differentiation. Therefore, TSI’s proposed definition of “virtually” is improper.

In support of its proposed definition, Precision cites to the ‘006 patent. The term “virtually” does not appear in the context of a virtual mark in the specification of the ‘738 patent. However, the ‘006 patent is incorporated by reference into the ‘738 patent. Accordingly, “[t]he information incorporated is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed.” *Manual of Patent Examining Procedure* § 2163.07(b) (2007). Therefore, the ‘006 patent is a part of the intrinsic record of the ‘738 patent and is relevant to the construction of “virtually.”

In the '006 patent, the specification states “[a] ‘virtual mark’ means a noted location on a material relative to a registration point such as an end of the material or an axis, without an actual mark on the material.” ‘006 Patent, col.2 ll.37-39. It is well settled that a patentee is free to be his own lexicographer, and can define a term how he chooses, so long as it is clearly set forth in the specification. *See Vitronics*, 90 F.3d at 1582. When the patentee acts as his own lexicographer, he is bound by the definition he chooses. *Id.* Although Precision’s proposed definition of “virtually” incorporates part of the definition of a “virtual mark” set forth in the ‘006 patent, it does not include all of it. The patentee’s lexicography governs and the court sees no reason not to adopt the entirety of the definition. Therefore, in the context of the claims of the ‘738 patent, “virtually” should be construed as “by noting a location on a material relative to a registration point such as an end of the material or an axis, without an actual mark on the material.”

D. “Workpiece”

The term “workpiece” appears in all of the independent claims of the ‘738 patent. The parties disagree as to whether a workpiece includes a fully processed product. The relevant portion of the specification states:

A workpiece, as used herein, is any piece of material that will be, or is being, processed by a processing system. Accordingly, a workpiece may be in a raw or “unprocessed” form (before any processing by a system), in a partially processed form (during and/or after partial processing by the system), or in a fully processed form (after processing of the workpiece by the system has been completed and/or the workpiece has passed through the system). Each processing station of a system thus may process the raw form of the workpiece, a partially processed form of the workpiece (such as a workpiece cut into smaller pieces or segments (a segmented form of the workpiece) and/or modified otherwise), or both. The fully processed form of a workpiece, as used herein, is termed a workpiece product or product. Although “fully processed” by a first pass through the system, a product may be processed additionally outside the system or during a second pass through the system.

'738 Patent, col.11 ll.37-53. As stated earlier, the patentees are free to be their own lexicographers, and in the event they choose to clearly define their own terms in the patent, their lexicography governs. The specification clearly sets forth that "a workpiece may be . . . in a fully processed form." *Id.* at col.11 ll.39, 42. Therefore, the definition of workpiece should include the fully processed form.

Although TSI contends that the language "[t]he fully processed form of a workpiece, as used herein, is termed a workpiece product or product" differentiates a workpiece from a fully processed product, the language "fully processed form of a workpiece" demonstrates that the fully processed form is meant to be a subset of the category of workpieces. This interpretation avoids having a contradiction with the earlier line in the same paragraph. Accordingly, a fully processed form should not be excluded from the definition of workpiece.

Because the patentees chose to be their own lexicographers, the court should adopt the definition of "workpiece" which is set forth by the patentees in the specification. Therefore, the court should construe a workpiece as "any piece of material that will be, or is being, processed by a processing system whether in an unprocessed form, a partially processed form, or a fully processed form."

Conclusion

The court should construe "field" as an "element of data; "spreadsheet" as "an editable table storing data arranged in rows and/or columns;" "drill list data corresponding to positions on workpieces where holes should be drilled" as "data relating to the formation of holes in desired positions on a workpiece;" "optical measuring device" as "a device that can measure at least one property of electromagnetic radiation in the wavelength range including only infrared, visible,

ultraviolet, and X rays;” “virtually” as ““by noting a location on a material relative to a registration point such as an end of the material or an axis, without an actual mark on the material;” and “workpiece” as “any piece of material that will be, or is being, processed by a processing system whether in an unprocessed form, a partially processed form, or a fully processed form.”

Scheduling Order

The above Findings and Recommendation will be referred to a United States District Judge for review. Objections, if any, are due no later than November 5, 2008. If no objections are filed, review of the Findings and Recommendation will go under advisement on that date.

If objections are filed, any party may file a response within fourteen days after the date the objections are filed. Review of the Findings and Recommendation will go under advisement when the response is due or filed, whichever date is earlier.

DATED this 22 day of October, 2008.

/s/ John V. Acosta

JOHN V. ACOSTA

United States Magistrate Judge